



### Model Number

NBB5-18GK50-E2-M

### Features

- 5 mm flush
- Extended temperature range  
-40 ... +85 °C
- E1-Type approval
- Increased noise immunity 100 V/m
- With increased sealing, protection class  
IP68 / IP69K
- Highly shock and vibration resistant

### Accessories

#### BF 18

Mounting flange, 18 mm

#### EXG-18

Quick mounting bracket with dead stop

## Technical Data

### General specifications

Switching function	Normally open (NO)
Output type	PNP
Rated operating distance	$s_n$ 5 mm
Installation	flush
Output polarity	DC
Assured operating distance	$s_a$ 0 ... 4.05 mm
Reduction factor $r_{AI}$	0.35
Reduction factor $r_{Cu}$	0.2
Reduction factor $r_{304}$	0.8
Reduction factor $r_{Brass}$	0.4
Output type	3-wire

### Nominal ratings

Operating voltage	$U_B$ 5 ... 60 V
Switching frequency	$f$ 0 ... 1500 Hz
Hysteresis	$H$ typ. 5 %
Reverse polarity protection	reverse polarity protected
Short-circuit protection	pulsing
Inductive overvoltage protection	yes
Surge suppression	yes
Voltage drop	$U_d$ $\leq$ 2 V
Rated insulation voltage	$U_{BIS}$ 60 V
Operating current	$I_L$ 0 ... 200 mA
Off-state current	$I_r$ 0 ... 0.5 mA typ. 0.1 $\mu$ A at 25 °C
No-load supply current	$I_0$ $\leq$ 7 mA
Time delay before availability	$t_v$ $\leq$ 220 ms
Switching state indicator	LED, yellow

### Functional safety related parameters

MTTF <sub>d</sub>	1055 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

### Ambient conditions

Ambient temperature	-40 ... 85 °C (-40 ... 185 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)

### Mechanical specifications

Connection type	cable PUR, 2 m
Core cross-section	3 x 0.75 mm <sup>2</sup>
Housing material	PBT
Sensing face	PBT
Degree of protection	IP68 / IP69K
Mass	120 g

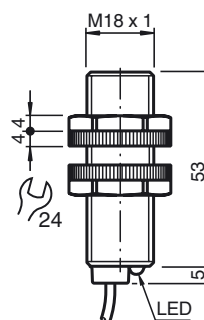
### Compliance with standards and directives

Standard conformity	
Standards	EN 60947-5-2:2007 IEC 60947-5-2:2007

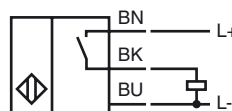
### Approvals and certificates

UL approval	cULus Listed, General Purpose, Class 2 Power Source
CSA approval	cCSAus Listed, General Purpose, Class 2 Power Source
CCC approval	Certified by China Compulsory Certification (CCC)
E1 Type approval	10R-04

## Dimensions



## Electrical Connection



**Installation Hint**

Interference immunity in accordance with  
 DIN ISO 11452-2: 100 V/m  
 Frequency band 20 MHz up to 2 GHz

Mains-borne interference in accordance with ISO 7637-2: Pulse

	1	2a	2b	3a	3b	4	5
Severity level	III	III	III	III	III	III	III
Failure criterion	C	A	C	A	A	A	B

EN 61000-4-2:	CD: 8 kV / AD: 15 kV
Severity level	IV IV
EN 61000-4-3:	30 V/m (80...2500 MHz)
Severity level	IV
EN 61000-4-4:	2 kV
Severity level	III
EN 61000-4-6:	10 V (0.01...80 MHz)
Severity level	III
EN 55011:	Class A